October 19, 1987

Ed Ayers

Ted Duaime

Marvin Miller, Rick Appleman

ANALYTICAL RESULTS OF ORPHAN BOY MINE WASTE

Attached are partial analytical results of the material collected from the Orphan Boy waste dump, per your request.

Material was collected, in the field, from five drill holes at one-foot increments and were then composited in the lab to one sample per drill hole and submitted for digesting and analysis. Due to equipment problems with the plasma, only arsenic and lead values are presently available.

I have discussed these results with Dr. Richard Appleman, Director of Hazardous Waste Management Research, due to the elevated lead levels. We both feel that extreme care should be taken if you choose to use this material as backfill around the football field (Alumni Coliseum). As I mentioned to you during our first discussion about using this material, the EPA collected material from the waste piles near the Orphan Boy Mine during their soil screening study this past summer. Therefore, I would suggest that you contact them about using this material. Lead concentrations are of concern to EPA officials due to potential health risks associated with exposure to elevated levels of lead.

The digest performed on the sample material is somewhat more rigorous than that used by EPA during the soil screening, but gives a better idea of maximum concentration levels possible from leaching of the material.

It might be feasible to use this material if adequate measures are taken to isolate it from water and human contact.

I would be glad to discuss these results further at your convenience and will forward the remaining analytical data once it becomes available.

TD:blm

Attachment

Soil Analyses from Orphan Boy Waste Material

Field Number/Sample Depth	As (ug/g)	Pb (ug/g)
OB-1, 0-10 FT	127.	3200.
OB-2, 0-10 FT	149.	5100.
OB-3, 0-10 FT	101.	2200.
OB-4, 0-10 FT	116.	2700.
OB-5, 0-9 FT	99.	2600.
OB-5, 0-9 FT (Duplicate)	98.	2600.

Aqua-Rega - HF digest; results by AA method